



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,599	09/11/2000	Glenn H. McGall	2719.2001-000	4766
42145	7590	11/01/2005	EXAMINER	
FISH & NEAVE IP GROUP			EPPS FORD, JANET L	
ROPES & GRAY			ART UNIT	
ONE INTERNATIONAL PLACE			PAPER NUMBER	
BOSTON, MA 02110			1633	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/659,599

Applicant(s)

MCGALL, GLENN H.

Examiner

Janet L. Epps-Ford

Art Unit

1633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 30-38 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-23, and 30-38 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-11-04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Claim Rejections - 35 USC § 103

1. Claims 1-23, and 30-38 remain rejected under 35 U.S.C. 103(a) as being unpatentable over McGall et al. (5,412,087; US'087) in view of McGall et al. (WO 98/39348 A1; WO'98), for the reasons of record set forth in the Office Action mailed 4-09-2003.
2. Applicant's arguments filed 8-01-05 have been fully considered but they are not persuasive. Applicants traverse the instant rejection on the grounds that the amendment to the claims to recite that the bond between M and C=O, which is the moiety of the photocleavable protecting group attached to M, is capable of being cleaved by photolysis using light having a wavelength of about 365 nm, addresses the examiner's grounds for maintaining the instant rejection set forth in the prior office action. Specifically, Applicants argue that the claims as amended, are commensurate in scope with the evidence of non-obviousness provided in the McGall Declaration. According to Applicants, "[T]he Declaration stated that it is unexpected that a protecting group can be cleaved from a reactive site with 365 nm light. The amended claims explicitly recite that the protecting groups are cleavable from a compound with 365 nm light. Thus, the claimed compounds have unexpected properties and methods employing these compounds are non-obvious as well."

According to Applicants the third issue raised by the examiner with respect to the methods of DNA synthesis is unclear, since the invention is also useful in other applications where light of less than 365 nm is damaging.

Applicants therefore concluded that the claims, as amended are commensurate in scope with the evidence of non-obviousness provided in the McGall Declaration, and requested withdrawal of the rejection.

Contrary to Applicant's assertions, the instant claims are not commensurate in scope with the unexpected results described in the McGall Declaration, because the instant claims recite wherein the wavelength of light used in the photolysis of the claimed compounds is "*about 365 nm*," the scope of the claims now encompass wavelengths that are below 365 nm and above 365 nm, however the Declaration describes the unexpected results associated with the observation that "a protecting group can be cleaved from a reactive site with 365 nm light" (see page 32, last paragraph), not with the use of about 365 nm. Additionally, the instant claims do not recite any particular solvent used during the photolysis step. In the specification as filed, photolysis conditions are clearly set forth, see Figure 2, and McGall et al. (1997) that describes the photolysis conditions used in the examples described in the specification, see page 14, lines 21-22. Therefore,

3. Moreover, as stated previously, it is clear that compounds of the present invention are encompassed by the "core structure" $\text{Ar-C(R1)(R2)-O-C(O)-}$ of the compounds taught by McGall et al. (WO'98). Although Applicants argue that the substituents of the aromatic portion of the protecting groups of McGall et al. (WO'98)

are preferably electron-donating groups, therefore one of ordinary skill in the art would not be lead to prepare a protecting having an electron withdrawing group such as a nitro group. First it is noted that Applicants are limiting the scope of the McGall et al. reference to one particular embodiment, however it is clear that other substituents into the aromatic ring are also contemplated. Moreover, absent evidence to the contrary, McGall et al. (WO'98) clearly state that substitutions of the Ar group may be mono-, di- or tri-substituted, independently, with alkyl, lower-alkyl, or a nitro group (*inter alia*; see page 6, lines 1-4). These substitutions are all considered to be functionally equivalent substituents that would produce a functional photocleavable group.

Claim Rejections - 35 USC § 102

4. Claim 30 remains rejected and amended claims 1, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Pacifici et al. (US 3879356), for the reasons of record set forth in the prior Office Action.

5. Applicants traversed the instant rejection on the grounds that the bond between toluene (a tolyl) and the carbonyl group, a carbon-carbon bond, cannot be cleaved by light of 365 nm wavelength. According to Applicants such light does not have sufficient energy to effect cleavage of a carbon-carbon bond. Thus, Applicants conclude that Pacifici et al. does not anticipate the instant invention. Applicants do not provide any reference or scientific data to support their assertions. Applicant's arguments do not take the place of evidence that a wavelength of about 365 nm cannot effect cleavage of the carbon-carbon bon of the compound disclosed in this reference. Absent evidence to the contrary, since there is no mention of any particular solvent conditions in the claims,

Art Unit: 1633

under certain solvent conditions (methanol, toluene, dioxane, DCM, DMF, acetonitrile, etc, see Table 2 of McGall et al. 1997 describes the dependence of photolysis half-life on solvent), a wavelength of about 365 nm (note the claim encompasses greater than 365 nm) could potentially effect the cleavage of the carbon-carbon bond within the compound disclosed by Pacifici et al.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

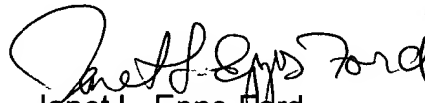
Art Unit: 1633

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Epps-Ford whose telephone number is 571-272-0757. The examiner can normally be reached on M-F, 9:30 AM through 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave T. Nguyen can be reached on 517-272-0731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.


Janet L. Epps-Ford
Primary Examiner
Art Unit 1633

JLE